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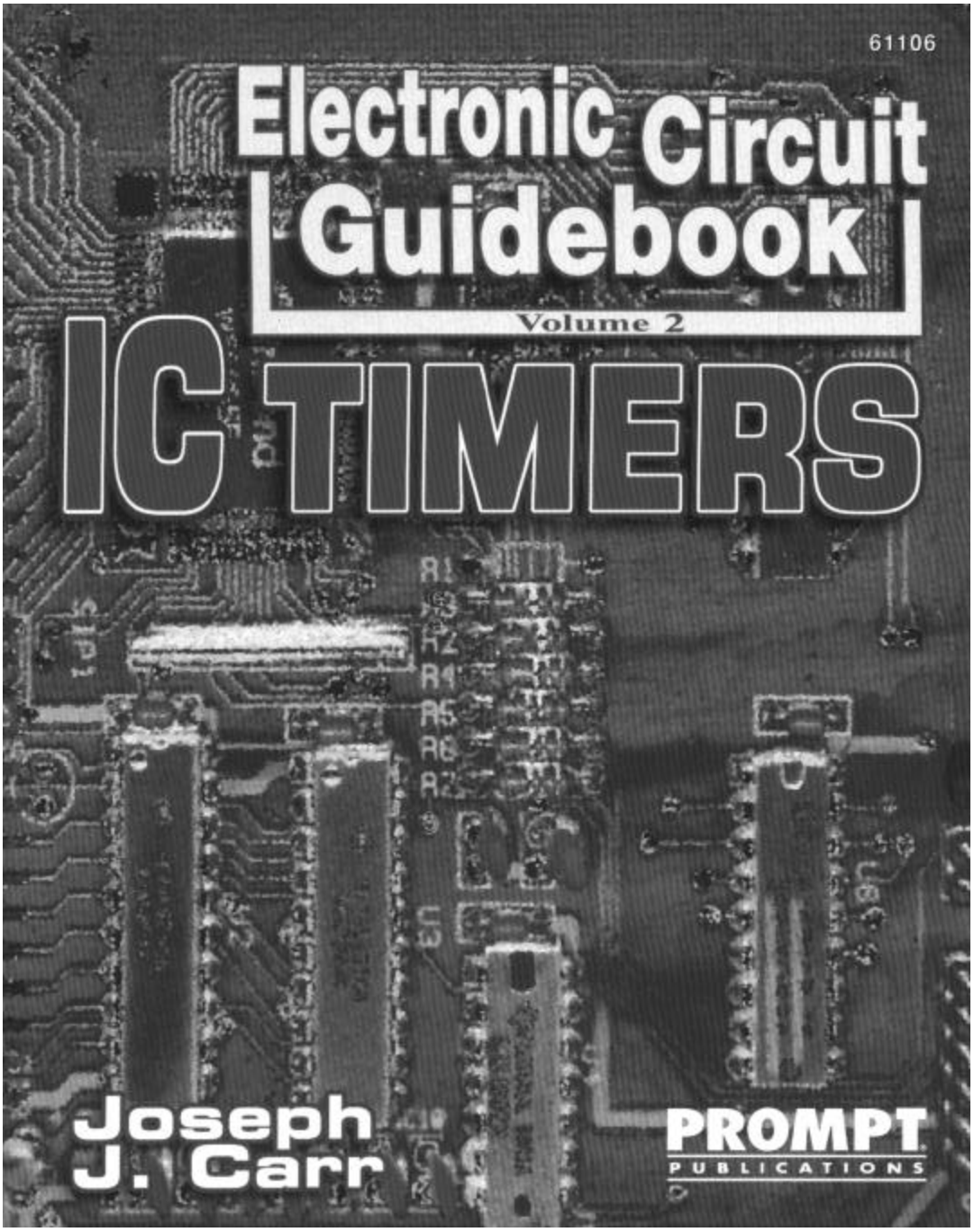

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Timer circuits used to be a lot of trouble to build and tame for several reasons. One major reason was the fact that DC power supply variations would cause a frequency shift or slow drift -- modern timers are designed to permit a wide variation in the DC supply voltage without affecting the output frequency or single-pulse duration. Another reason is that the equations determining the frequency or timing were little more than approximate, despite the appearance of great precision in the textbooks -- modern timers will work very closely to the way the textbooks say they do. *Electronic Circuit Guidebook, Volume 2: IC Timers* will show you how it is done.

Part I of this book is organized to demonstrate the theory of how various timers work. This is done by way of an introduction to resistor-capacitor circuits, and in-depth chapters on TTL and CMOS digital IC timers, the LM-555 and other IC devices, operational amplifier timer circuits, retriggerable timers and long duration timers. Through simplified equations and detailed graphics, the information presented is perfect for both practicing technicians and enthusiastic hobbyists.

Part II presents a variety of different circuits and projects. Some of the circuits are standalone, while others are for incorporation into other circuits. Examples of some of the circuits included are: touchplate trigger, missing pulse detector, analog audio frequency meter, one-second timer/flasher, relay and optoisolator drivers, two-phase digital clock, 100kHz crystal calibrator and many more. *Electronic Circuit Guidebook, Volume 2: IC Timers* will teach you enough that you will not only be able to rework and modify the circuits covered here, but also design a few of your own.

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Preface

Timer circuits used to be a lot of trouble to build and tame for several reasons. One major reason was the fact that DC power supply variations would cause a frequency shift or slow drift. Modern timers are designed to permit a wide variation in the DC supply voltage without affecting the output frequency or single-pulse duration. Another reason is that the equations determining the frequency or timing were little more than approximate, despite the appearance of great precision in the textbooks. Modern timers will work very closely to the way the textbooks say they do.

There are a number of modern timers on the market. Some of them are old favorites. The LM-555 device, for example, has been around since the mid-1970s, but is adaptable to so many different purposes that it maintains a large following. Popularity over long time periods is not something integrated circuits see!

The first part of this book is organized to demonstrate the theory of how the timers work, with application examples coming later. Feel free to modify these circuits to your own use. In fact, I hope this book teaches you enough that you not only can rework and modify my circuits, but design a few of your own.

Connections

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